

PRODUCT BULLETIN

APPLICATION GUIDE

Protection film: BODYFENCE RANGE

REQUIRED EQUIPMENT

- › Adhesive tape Tesa® 50110
- › 1-litre PULVERISAT vaporiser
- › 19-litre SHAGSPRAY vaporiser
- › Water + pH-neutral soap
- › STEAMERSC1 steam cleaner
- › HEXISGEL application liquid
- › Demineralised water
- › SHAGFENCES or SHAGFENCEM squeegee
- › Standard SHAGBODY squeegee
- › CUTOLFA30 30° blade cutter
- › LAMOLFA30 refill
- › Liquids for the cleaning of application surfaces:
 - › SHAGREMOV
 - › SHAGCLEAN
- › ProTech® SHAMP CARV2 car shampoo
- › Soft cloth
- › BODYFINISH cleaning kit

STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep the films away from any major source of heat (radiators and heaters, direct exposure to sunlight, etc.): the best temperature ranges from 15 °C to 25 °C (59 °F to 77 °F) with relative humidity of 50 %.

Store your films in their original packaging, in a dry environment. The rolls are wrapped in sealed polyethylene bags and are maintained in their cardboard packaging by plastic suspension caps to prevent the windings from being crushed by their own weight.

Always store the rolls in an upright position.

FEATURES

The Bodyfence films are specially developed for protecting car bodywork. Its excellent shock-absorbing properties protect your bodywork against chips caused by stones, insects, car doors, washing brushes, etc. They also provide an excellent protection against vandalism.

BODYFENCE: BODYFENCE is a transparent adhesive-coated film with improved surface slickness in comparison with PVC films (CAR100B).

BODYFENCEX: BODYFENCEX is a transparent adhesive-coated film, which is self-healing at ambient temperature.

BODYFENCEP: BODYFENCEP is a transparent adhesive-coated film, which is self-healing at ambient temperature and which is thicker than the BODYFENCE and BODYFENCEX films. It is specially developed for protecting the front side of vehicles.

BFBLACK: BFBLACK is a black film, which is self-healing at ambient temperature, for protecting and decorating metal roofs of cars.

BFWIDE: BFWIDE is a transparent, adhesive-coated film, which is self-healing at ambient temperature and specially developed for protecting large-sized car bonnets.

PREPARING YOUR APPLICATION SURFACE

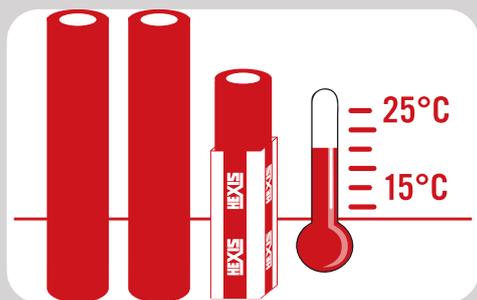
Your BODYFENCE film can be applied to any vehicle body as long as the target surface is clean, smooth, non-porous and free from any traces of oil, grease, wax, silicone or other contaminants. To avoid unexpected outcomes, always assume that every substrate is dirty and needs to be cleaned.

Do not forget to carry out a preliminary trial on a small surface to check if the substrate remains undamaged.

For further technical information on the BODYFENCE film, please refer to the technical data sheet available on our website at www.hexis-graphics.com.

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Application methods are based upon HEXIS' experience and are non-restrictive. Comply with instructions to ease application of HEXIS films. HEXIS also offer training sessions for beginners and professionals to achieve optimum results.

1. RECOMMENDATIONS:

- › Optimal adherence of the BODYFENCE films is obtained after 24 hours following application.
- › The BODYFENCE films are usually used on the vehicle body areas the most exposed to aggression (bumper, bonnet, doors, etc.), however, they may also be used on the entire car surface!
- › After cutting the necessary film length for the wrapping project, the remaining film must be stored on its original core (do not cut the rolls into several lengths, do not repackage the product); the roll must be closed immediately and properly after use (tape or roll-collars), without exerting pressure on the film, in order to preserve all its qualities.

2. PRELIMINARY TEST OF THE APPLICATION SURFACES:

Before proceeding with any application, the installer must first inspect the substrate and the paint to which the film will be applied.

The installer and the client are responsible for the suitability assessment of the target surface to be covered.

2.1. Preliminary inspection of the substrate:

- › Any fresh new paint must have dried for at least 7 days at 25 °C (77 °F) to outgas completely. An outgassing test must be carried out before applying the film.
- › Any old, powdery or flaky paint must be sanded and renewed before application and must undergo a tear-off test.

2.2. Tear-off test:

Using a TESA® 50110 adhesive tape, or similar, apply it to a surface of 2.5 cm x 5 cm (1 in. x 2 in.) plus some overhang material for easier removal. Fold and tear it off with one quick pull perpendicular to the substrate surface. The film must generate a certain resistance during its removal. Repeat this process in several places.

> On request, HEXIS can provide you with a Tesa® adhesive tape in 2.5 cm x 5 cm (1 in. x 2 in.) size. HEXIS cannot be held liable for any damage to the substrate following the execution of this test.

2.3. Outgassing test:

Use a square piece of around 15 cm x 15 cm (6 in. x 6 in.) of self-adhesive polyester or of the film to be applied. Wait for 24 hours or 2 hours at 65 °C (149 °F). The appearance of bubbles indicates that the substrate has insufficiently outgassed. Therefore, this process should be repeated after a couple of days; or else the procedure described below should be carried out.

2.4. Outgassing procedure with flame treatment:

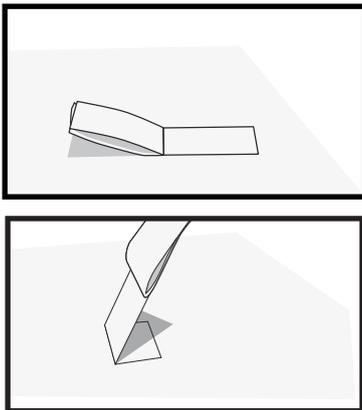
(Polycarbonate, translucent or diffusing methacrylate, expanded PVC, etc.)

This method consists of changing the surface tension of a substrate by swiping it with the flame of a gas burner. Using the flame's blue tip, proceed evenly with fast sweeps horizontally and vertically along the whole substrate surface.

⚠ MOVE THE FLAME IN SWIPING MOTIONS ON THE SUBSTRATE (RISK OF DESTROYING THE SUBSTRATE IF A FIXED POINT IS HEATED MORE THAN A SECOND).

The film must be applied right after that treatment as this light surface treatment disappears after a few minutes.

> HEXIS are not liable for any bubbles caused by outgassing.



3. CLEANING:

Cleaning of the substrate is required before performing the application. It should always be assumed that the substrate is contaminated with dirt. Some residues or contaminants may not be visible; however, they may impact the adherence of the film.

 Before using any cleaning liquids or chemicals, please refer to the technical data sheets and safety data sheets available for download on our website at www.hexis-graphics.com.

3.1. Clean and soiled surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCARV2 vehicle body shampoo, then carry out a final cleaning using the SHAGCLEAN product.

3.2. Heavily soiled surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCARV2 vehicle body shampoo, then use the SHAGREMOV product.

 Handle the SHAGREMOV product in a ventilated area. Wear protective goggles and gloves.

Prior to treatment, run a compatibility test on a small, inconspicuous area of the substrate to be treated. Indeed, certain plastic materials might be damaged by the SHAGREMOV product.

- › Spray the SHAGREMOV product onto the dirty surface and spread out using a dry cloth.
- › Then wait for a few minutes. Spray the SHAGREMOV product again, then wipe it dry with a clean cloth or squeegee.
- › When the substrate is clean and dry, carry out a final cleaning using the SHAGCLEAN products.

4. APPLICATION OF THE BODYFENCE FILM:

The recommended minimum application temperature is +10 °C (+50 °F). Preferably, apply at a temperature ranging from +15 °C to +35 °C (from +59 °F to +95 °F).

BODYFENCE films must be applied according to the «wet» method, using either soapy water or our ready-to-use HEXISGEL product (for high-deformation surfaces).

- › To apply with soapy water, prepare the PULVERISAT or SHAGSPRAY vaporiser with water, supplemented with 1 to 3 ml of pH-neutral soap per litre of water. This mixture can be easily removed.

- › Measure the parts to be covered. Cut the BODYFENCE while leaving a margin of at least 10 cm (4 in.) around the surface to be covered in order to stretch it during application, and avoid any finger marks. (FIG. 01)

SHAMPCARV2
Concentrated vehicle
shampoo



SHAGREMOV
Powerful cleaning
agent



SHAGCLEAN
Cleaning and
degreasing finishing
agent

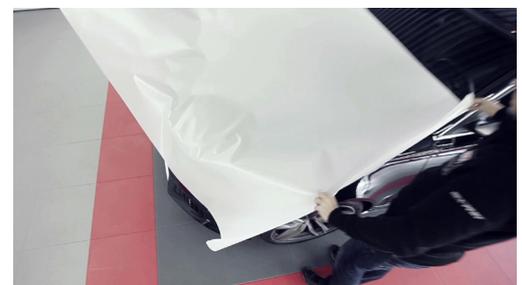


Figure 01



Figure 02

- › Carefully separate the liner from the BODYFENCE. (FIG. 02)



Figure 03

- › Spray the vehicle body to be protected as well as the adhesive-coated side of the BODYFENCE with the HEXISGEL or soapy liquid (PULVERISAT or SHAGSPRAY) (FIG. 03). This will enable a better positioning of the product on the vehicle.



Figure 04

- › Firmly stretch the BODYFENCE and position it (adhesive-coated side on the body) in order to wrap the structure. (FIG. 04)

Note: For an optimal wrapping of a concave or convex surface, it may be necessary to soften the film using the STEAMERSC1 steam cleaner.

- › Apply the film using one of these squeegees (SHAGFENCES, SHAGFENCEM or SHAGBODY) upon size and deformation level of the surface to be covered.



Figure 05

- › To ensure that the squeegee glides easily, spray the HEXISGEL or soapy liquid (PULVERISAT or SHAGSPRAY) onto the BODYFENCE film. Then apply it, holding the squeegee at 45°. Press firmly to adhere the film to the surface and remove the application liquid. (FIG. 05)

- › After all removal of the BODYFENCE for adjusting or positioning, spray the film and vehicle body before any reapplication.

- › Considering the different existing paint qualities, it may be necessary to activate the adhesive strength by spraying the very concave and/or convex shapes with HEXISGEL.

- › Once the BODYFENCE film is applied, cut as indicated in the following paragraphs:

4.1. Straight cut with overlap

To avoid scratching the paint, the cutter blade must always be parallel to the vehicle body.

- › Use a cutter with a new blade.
- › For carrying out the cutting, the cutter blade must be placed against the edge of the adjacent section. During cutting, make sure you always follow this edge by positioning the cutter towards the outside. (FIG. 06)
- › After cutting, 2 to 3 mm (1 to 1½ in.) of the film should overlap the edge of the covered vehicle body.



Figure 06

- › If there are no adjoining sections, cut the film surplus leaving a 2- to 3-mm (1- to 1½-in.) film overlap. (FIG. 07)
- › Remove any excess film.



Figure 07

- › To finish, run the squeegee over the cut. Incline the squeegee towards the thinner edge (FIG. 08). Firmly apply over the edges, round parts and neighbouring or opposed areas.



Figure 08

- › Always cut the angles of the BODYFENCE film in rounded sections in order to ensure optimum adhesion of the cut film edges.

4.2. Cut without overlap

This method is used for a cut along a seal or any trim that cannot be disassembled.

- › Use a cutter with a new blade.
- › Trace with your finger the contours of the area. Lift the vinyl of the adjacent part and drag it into the hollow using a squeegee so as to mark the seal edge.
- › For cutting, the cutter blade must be placed in flat position on the squeegee.
- › The squeegee + cutter blade must be parallel to the body and perpendicular to the seal.
- › Make the squeegee/cutter blade compound slide over the body to carry out the cutting by always maintaining this blade orientation.
- › Remove any excess vinyl.
- › Cut the angles of the BODYFENCE film in rounded sections in order to ensure optimum adhesion of the cut film edges.
- › Finish off by firmly running the squeegee over the cut.

4.3. Finishing:

If the film has been applied on a heavily deformed surface with a liquid other than HEXISGEL, the film edges should be rinsed with demineralised water (or tap water if demineralised water is not available) in order to increase the adhesive's adhesion to the substrate more quickly.



Figure 09

- ▶ Place absorbent paper on the SHAGFENCES squeegee. Apply pressure to the cut edges to remove as much as humidity as possible. (FIG. 09)



Figure 10

- ▶ Firmly apply the film with the squeegee to the edges, rounded sections and adjacent or opposite faces of the body. (FIG. 10)



Figure 11

- ▶ If wrinkles appear at the edge trim, press them with your finger for approximately 30 seconds. (FIG. 11)

5. CLEANING AND MAINTENANCE OF THE BODYFENCE FILM:

For optimum maintenance of the BODYFENCE film, HEXIS suggest to use their range of HEXIS cleaning agents included in the BODYFINISH kit, specially designed for total wraps.

The BODYFENCE film can be cleaned in any conventional automatic car wash, using cleaning products and detergents used for professional maintenance of vehicles and advertising equipment.

Nevertheless, for the use of high-pressure cleaners, respect the following procedure: apply medium water pressure at a minimum distance of 50 cm (20 in.) and a maximum water temperature of 35 °C (95 °F).

⚠ Caution: However, the film should not be cleaned within the first 48 hours following its application as this can affect the adhesive strength that may result in the film peeling off.

⚠ Caution: Solvents and corrosive detergents must not be used.

⚠ Caution: HEXIS are not liable for any adhesive films cleaned with the unspecified additives from cleaning stations.

⚠ Caution: Car washes: The additive products and the condition of the rotating brushes may impair the adhesive strength of the films. It is commonly admitted that after 10 car washes, the polyurethane paint becomes streaked; therefore, and in the same way, we are not accountable for these mechanical effects that may affect the film appearance.

HEXIS tip: Always carry out a test on a small area before cleaning the entire surface to be covered.

6. REMOVAL PROCEDURE:

The BODYFENCE film features a special adhesive designed to facilitate removal.

- › Lift the corner gently with the cutter without damaging the substrate.
- › Subsequently proceed, by heating small areas, to peel off the film gently.
- › The film should form an angle of 70° to 80° relative to the substrate surface to reduce the risk of leaving any adhesive on the substrate or tearing off the film.

 *An angle more or less wide or acute will cause the film to break more easily.*

- › Continue to peel off the film gently until it is completely removed while keeping a watchful eye on the heat applied, on the pulling angle of the film, and the pulling speed.
- › If any adhesive remains on the substrate, take a cloth soaked with our SHAGREMOV product and rub the surface until all traces disappear.

 *Prior to treatment, run a compatibility test on a small, inconspicuous area of the substrate to be treated. Indeed, certain plastic materials might be damaged by the SHAGREMOV product. HEXIS are not liable for damages and degradations caused to the substrate by using incompatible products.*

 *Before using any of our liquids, please refer to the technical data sheets available on our website at www.hexis-graphics.com.*

For further technical information, please refer to the Technical Data Sheets available for free download from our website www.hexis-graphics.com, on the "Professionals" pages.

Due to the great variety of substrates and the growing number of new applications, the installer must check the suitability of the media for each application. All the published information does not however constitute a binding guarantee. The seller cannot be held liable for indirectly related damages and assumes no liability for claims that are higher than the replacement value of the purchased product. All specifications are subject to potential changes without prior notice. Our specifications are automatically updated on our website www.hexis-graphics.com.

